

What is claimed is:

sub  
A1 1. An auto exposing apparatus for an image sensor, the apparatus comprising:

5 first counting means receiving image data from an image sensor for counting a number of first pixels for an image frame, each of the first pixels having a luminance value associated therewith that is higher than a first predetermined level;

10 second counting means receiving image data from the image sensor for counting a number of second pixels for an image frame, each of the second pixels having a luminance value associated therewith that is lower than a second predetermined level;

storing means for storing an optimum exposure time for each luminance level; and

15 brightness analyzing means for determining whether the image frame is to be controlled to be brighter or darker in response to the numbers of first and second pixels, and selecting the luminance level of the field output as an address of the storing means,

20 wherein a exposure time corresponding to the address outputted from the brightness analyzing means is output to the image sensor to control the exposure time of the pixels.

2. An apparatus according to claim 1, wherein the brightness analyzing

means includes:

a first level decision unit for deciding the brightness level of a bright screen in response to the number of first pixels;

a second level decision unit for deciding the darkness level of a dark screen in response to the number of the second pixels;

screen control determining means for determining whether the image frame is to be controlled to brighter or darker in response to the numbers of the first and second pixels and outputting a screen control determining signal indicative thereof; and

selecting means for selecting an address of the storing means in response to the screen control determining signal and an output of one of the level decision units.

3. An apparatus according to claim 1 wherein the first and second predetermined levels are the same.

4. An apparatus according to claim 1 wherein the first and second predetermined levels are different.

5. An auto exposing apparatus for an image sensor, the apparatus comprising:

a first counter constructed and arranged to receive image data from an image sensor for counting a number of first pixels for an image frame, each of

the first pixels having a luminance value associated therewith that is higher than a first predetermined level;

a second counter constructed and arranged to receive image data from the image sensor for counting a number of second pixels for an image frame,  
5 each of the second pixels having a luminance value associated therewith that is lower than a second predetermined level;

a look up table storing an optimum exposure time for each luminance level; and

brightness analyzer constructed and arranged to determine whether an  
10 imaged field is to be controlled to be brighter or darker in response to the numbers of first and second pixels, and selecting luminance level of the field output as an address of the storing means,

wherein a exposure time corresponding to the address outputted from the brightness analyzing means is output to the image sensor to control the  
15 exposure time of the pixels.

6. An apparatus according to claim 5, wherein the brightness analyzer means includes:

a first level decision unit for deciding the brightness level of a bright  
20 screen in response to the number of first pixels;

a second level decision unit for deciding the darkness level of a dark screen in response to the number of the second pixels;

a screen control determiner constructed and arranged to determine

whether the image field is to be controlled to be brighter or darker in response to the numbers of the first and second pixels and outputting a screen control determining signal indicative thereof; and

a selector constructed and arranged to select an address of the look up table in response to the screen control determining signal and an output of one of the level decision units.

7. An apparatus according to claim 5 wherein the first and second predetermined levels are the same.

8. An apparatus according to claim 5 wherein the first and second predetermined levels are different.

9. An apparatus according to claim 5 wherein the look up table is a ROM.

10. An apparatus according to claim 5 wherein the look up table is a PROM.

11. A method for auto exposing apparatus an image sensor, comprising:  
receiving image data from an image sensor;  
counting a number of first pixels for an image frame, each of the first pixels having a luminance value associated therewith that is higher than a first

predetermined level;

counting a number of second pixels for an image frame, each of the second pixels having a luminance value associated therewith that is lower than a second predetermined level;

5 storing an optimum exposure time for each luminance level;

analyzing whether the image frame is to be controlled to be brighter or darker in response to the numbers of first and second pixels, and selecting the optimum luminance level of the field; and

controlling exposure time based on the optimum luminance level.

09751451.010201